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What is claimed is:

1. A radiation source module for use of fluid treatment system, the module comprising:
 - 5 a frame having a first support member;
at least one radiation source assembly extending from and in engagement with a first support member, the at least one radiation source assembly comprising at least one radiation source disposed within a protective sleeve; and
an optical radiation sensor disposed within the protective sleeve.
- 10 2. The radiation source module defined in claim 1, wherein the frame further comprises a second support member opposed to and laterally spaced from the first support member, the at least one radiation source assembly disposed between each of the first support member and the second support member.
- 15 3. The radiation source module defined in claim 2, wherein the frame further comprises a third support member interconnecting the first support member and the second support member.
- 20 4. The radiation source module defined in any one of claims 1-3, wherein the frame further comprises a ballast for controlling the at least one radiation source.
5. The radiation source module defined in any one of claims 1-4, wherein the first support member comprises a hollow passageway for receiving a lead wire
25 for conveying electricity to the at least one radiation source.
6. The radiation source module defined in any one of claims 1-5, wherein the protective sleeve comprises a quartz sleeve.
- 30 7. The radiation source module defined in any one of claims 1-6, wherein the radiation source module comprises a plurality of radiation source assemblies at

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A1* ~~least one radiation source assembly comprising the optical radiation sensor disposed within the protective sleeve.~~

8. The radiation source module defined in claim 7, wherein the radiation source module comprises at least one radiation source assembly having no optical radiation sensor.

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A2* 9. ~~The radiation source module defined in any one of claims 1-8, wherein the radiation source assembly comprises a plurality radiation sources.~~

10. The radiation source module defined in any one of claims 1-9, wherein the optical radiation sensor is disposed adjacent one end of the protective sleeve.

11. A radiation source assembly for use in a radiation source module, the radiation source assembly comprising at least one radiation source and an optical radiation sensor, both of the at least one radiation source and the optical radiation sensor being disposed within a protective sleeve.

12. The radiation source assembly defined in claim 11, wherein the protective sleeve comprises a quartz sleeve.

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A3* 13. ~~The radiation source assembly defined in any one of claims 11-12, wherein the radiation source module comprises a plurality of radiation source assemblies at least one radiation source assembly comprising the optical radiation sensor disposed within the protective sleeve.~~

14. The radiation source assembly defined in claim 13, wherein the radiation source module comprises at least one radiation source assembly having no optical radiation sensor.

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A4* 15. ~~The radiation source assembly defined in any one of claims 11-14, wherein the radiation source assembly comprises a plurality of radiation sources.~~

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A4* 16. The radiation source assembly defined in any one of claims 11-15, wherein the optical radiation sensor is disposed adjacent one end of the protective sleeve.

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17. A fluid treatment system comprising:
a fluid treatment zone;

at least one radiation source assembly disposed in the fluid treatment zone, the at least one radiation source assembly comprising at least one radiation source disposed within a protective sleeve; and
an optical radiation sensor disposed within the protective sleeve.

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18. The fluid treatment system defined in claim 17, wherein the fluid treatment zone comprises a housing through which fluid flows.

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19. The fluid treatment system defined in claim 18, wherein the at least one radiation source assembly is secured to the housing.